

REMARKS

Reconsideration of this application and the rejection of claims 1-4, 6-8, 10, 12-15 and 20-22 are respectfully requested. Applicants have attempted to address every objection and ground for rejection in the Office Action dated August 16, 2005 (Paper No. 20050801) and believe the application is now in condition for allowance. The claims have been amended to more clearly describe the present invention.

Claims 1-4, 12, 13, 15 and 20-22 stand rejected under 35 U.S.C. §102(b) as being anticipated by German Patent No. 1 206 241 to Killias. Independent claims 1, 21 and 22 have been amended to distinguish from Killias. In particular, claim 1 now recites, among other things, that each multi-stage plenum chamber is configured to distribute the flow of water to porting of the valve means for admitting the water to the mixing chamber wherein **water enters and exits each stage at positions axially spaced from each other**. In this way, water is confined to flow in an axial direction within each stage of the plenum chamber. As a result, the water flow is distributed around each stage producing conditions that reduce asymmetric flow patterns and promote thorough mixing of the water flows admitted to the mixing chamber.

There is no disclosure in the Killias reference (or the other references of record) of multi-stage plenum chambers as now recited in claim 1. In particular, referring to Figure 1 of the Killias reference, it is clearly shown that the partition wall separating the inner and outer chambers corresponding to the multi-stage plenum chambers of the present

invention is provided with a plurality of circumferentially spaced apart holes that are **radially** aligned with the inlet to the outer chamber (see attached marked-up copy of Figure 1). As a result, the water flow enters and exits the outer chambers of Killias at the same axial position. In other words the positions at which water enters and exits the outer chamber are **not axially spaced from each other**. As a consequence, water flow in the Killias reference does not become uniformly distributed around the outer chamber before it passes through the holes into the inner chamber with the result that the axial flow stream from the holes to the porting of the valve means will be asymmetric.

Independent claim 22 has been amended in similar manner to claim 1 and it is submitted that this claim is allowable for the same reasons as claim 1.

Independent claim 21 is limited to two-stage inlet chambers having an outer chamber and an inner chamber and has been amended to recite, among other things, that the opening for water to enter the inner chamber is axially spaced from the porting **and from the inlet to the outer chamber**. In this way, the water flow in each chamber has an axial component from the point of entry to the point of exit. As explained above, Killias has axial flow in the inner chamber but not the outer chamber where the inlet is radially aligned with the holes in the partition separating the outer and inner chambers.

Accordingly, Killias does not disclose each and every feature of the mixing valve as now claimed, and as such the rejection based on 35 USC 102(b) is respectfully traversed.

Claims 6, 7, 12 and 14 are rejected under 35 USC 103(a) as being obvious in view of Killias. The arguments asserted above traversing Killias are reasserted here. Furthermore, Killias fails to disclose or suggest a solution to the problem of asymmetric flow patterns produced due to partial or incomplete mixing of the hot and cold flows entering the mixing chamber. Since claims 6, 7, 12 and 14 all depend ultimately from claim 1, now considered to be allowable, it is submitted that the Section 103 rejection based on Killias is respectfully traversed.

Claims 8 and 10 are rejected under 35 USC 103(a) as being unpatentable over Killias in view of Knapp. The arguments asserted above traversing Killias are reasserted here. Since claims 8 and 10 depend ultimately from claim 1, now considered to be allowable, it is submitted that the Section 103 rejection based on a combination of Killias and Knapp is respectfully traversed.

Claims 5, 9, 11 and 16-19 are withdrawn pursuant to 37 CFR 1.142(b) as being drawn to a non-elected species. However, amended claims 1, 21 and 22 are generic to all species and it is submitted that these claims are allowable with claim 1. Finally, claim 3 has been amended for consistency with amended claim 1 and claim 20 has been amended to be dependent on claim 3.

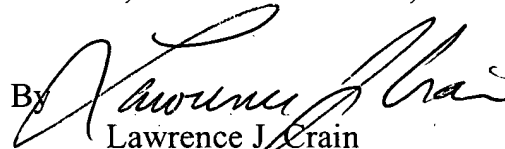
In view of the above amendments and remarks, the application is respectfully submitted to be in allowable form. Allowance of the rejected claims is respectfully

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requested. Should the Examiner discover there are remaining issues which may be resolved by a telephone interview, he is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By 
Lawrence J. Crain
Registration No. 31,497

Customer No. 24978

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Suite 2500
300 S. Wacker Drive
Chicago, Illinois 60606-6501
Telephone: (312) 360-0080
Facsimile: (312) 360-9315

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